

***Developing an Interactive Water Quality and Habitat Database and Making it Accessible on the Web***

Project Number: 02668  
Restoration Category: Monitoring  
Proposer: Cook Inlet Keeper  
Lead Trustee Agency: Not Known  
Cooperating Agencies: Other database committee members include:  
Alaska Department of Environmental Conservation, UAA's  
Environment and Natural Resource Institute, Mat-Su Borough,  
Anchorage Waterways Council, Wasilla Soil and Water  
Conservation District, Homer Soil and Water Conservation  
District, and the Kenai Watershed Forum  
Alaska SeaLife Center: No  
Duration: 1-year request for funding  
Cost FY 02: \$16,100 (direct costs are \$15,000 out of estimated \$79,500 budget)  
Geographic Area: Cook Inlet basin  
Injured Resources/Service: This project will result in direct and indirect benefits to all injured  
resources and lost or reduced services located in the Cook Inlet  
basin.

***ABSTRACT***

The project partners have come together to form a database committee to create a consistent data management system where all citizen groups and agencies can equally share, report and review their water quality and habitat data. The committee's objective is to make data more accessible and more useful to decision makers, stakeholders, resource managers, and the public. The committee will uplink a shared interactive database on the Internet where it can be viewed and queried with GIS watershed maps, photos and graphs so that it is user-friendly, educational and meaningful. Access to this data will help facilitate a better understanding about threats to, and solutions for, water quality and habitat.

## ***INTRODUCTION***

Cook Inlet Keeper and its partner groups are requesting one year of funding from the Exxon Valdez Oil Spill Trustees Council through the Ecosystem Synthesis/GEM Transition: Improving accessibility of research results. This project will establish a unified water quality and habitat database and make it accessible on the Internet where it can be viewed and queried with GIS maps, photos and graphs in a user-friendly and meaningful way.

Cook Inlet Keeper was the first community-based group in Alaska to implement a credible Citizen Environmental Monitoring Program founded on U.S. Environmental Protection Agency- and Alaska Department of Environmental Conservation-approved methods. In 1996, Keeper convened a Technical Advisory Committee comprised of water quality professionals, and began to train volunteers to monitor water quality and habitat in and around Kachemak Bay. As part of its monitoring work, Keeper created Alaska's first EPA- and ADEC-approved Quality Assurance Project Plans and Volunteer Manual which assure scientific credibility of citizen-collected data.

As a result of its successes, Keeper has moved into a Quality Assurance Agent role to guide and support other Cook Inlet communities in their efforts to establish similar monitoring programs. Keeper works with the Kenai Watershed Forum to support citizen-based monitoring of the Kenai River, and with UAA's Environment and Natural Resource Institute, the Anchorage Waterways Council, and the Wasilla Soil and Water Conservation District through formal Memoranda of Understanding to facilitate volunteer monitoring in the Anchorage Bowl and the Mat-Su Valley. Keeper also networks with Anchor Point's Community Rivers Planning Coalition, Seldovia Oil Spill Response Team, Ninilchik Traditional Council, and Port Graham/Nanwalek Watershed Council on monitoring projects in Kachemak Bay and on lower Kenai Peninsula salmon streams.

In December 2000, Keeper organized the first annual full-day monitoring partner group meeting in Anchorage. The purpose of the meeting was to link current and potential monitoring groups and agencies together to coordinate efforts, build credibility, and exchange information and ideas. This meeting was well attended by over 26 professionals representing 14 different organizations and agencies including: Cook Inlet Keeper, Homer Soil and Water Conservation District, Anchorage Waterways Council, Kenai Watershed Forum, Wasilla Soil and Water Conservation District, Port Graham/Nanwalek Watershed Council, University of Alaska Anchorage's Environment and Natural Resource Institute, Alaska Department of Environmental Conservation's (ADEC) Nonpoint Source Program, U.S. Geological Survey (USGS), U.S. Fish and Wildlife Kenai National Wildlife Refuge, Environmental Protection Agency (EPA), *Exxon Valdez* Oil Spill Trustees Council, and Cook Inlet Information Management and Monitoring System. The meeting included discussions of quality control procedures, volunteer and equipment management, and data management and accessibility.

To tackle the questions of data management and accessibility, a database committee was formed composed of Cook Inlet Keeper, Alaska Department of Environmental Conservation, UAA's Environment and Natural Resource Institute, Mat-Su Borough, Anchorage Waterways Council, Wasilla and Homer Soil and Water Conservation Districts, and the Kenai Watershed Forum. The committee is working on the following three objectives: 1) create a consistent data management system where all citizen groups and agencies can equally share, report and review

their water quality and habitat data; 2) interface citizen-collected data with EPA's STORET to make it more useful to agencies; and 3) make habitat and water quality data accessible on the Internet in a user-friendly, interactive format with links to GIS watershed maps, photos and graphs.

All citizen-based monitoring groups in Cook Inlet will be using the same database, leading to the most complete and comprehensive water quality database in Alaska. By linking this information to the Internet, this project will provide agencies and the public with the information needed to make more informed decision on resource management and water quality and habitat protection in Alaska.

## ***NEED FOR THE PROJECT***

### ***A. Statement of Problem***

The Cook Inlet watershed was hit hard by the *Exxon Valdez* oil spill. The currents in the Gulf of Alaska caused oil to move up into Cook Inlet, along the Kenai Peninsula and back down the Alaska Peninsula, soaking much of the shoreline and ocean floor with crude oil. As a result, many of Cook Inlet's coastal resources, and the services which they support, were impacted.

Although some recovery has occurred, Cook Inlet's sensitive resources face ongoing threats from a host of unsustainable activities, including rapid filling of wetlands; additional oil spills from an aging oil and gas infrastructure; discharge of pollutants from industrial activities; and increased nonpoint runoff from population growth and sprawl. Approximately 400,000 people, nearly 2/3 of Alaska's population, live in the vast Cook Inlet watershed, and a population increase of 600% over the past thirty years has substantially magnified pressures on Cook Inlet's sensitive resources.

Because of the rapid changes taking place in Southcentral Alaska, it is essential that we invest in long-term monitoring now before further impacts have occurred. The baseline information collected from monitoring will provide a benchmark for measuring future changes in water quality and habitat, a basis for developing and implementing best management practices and pollution prevention techniques.

As state and federal budgets for monitoring continue to decline, agencies rely heavily on other sources of monitoring information. In recent years, citizens have stepped in to fill this important role to gauge the health of our viable yet stressed public resources. Since 1998, Cook Inlet Keeper has been working with other groups to collect water quality and habitat information for the Cook Inlet watershed. Keeper is now ready to synthesize this information and make it more accessible to agencies, decision makers and the public to help facilitate a greater understanding about threats to, and opportunities for, water quality and habitat.

### ***B. Rationale/Link to Restoration***

The Cook Inlet watershed supports a rich fabric of life, including sea otters, harbor seal, orca whales, several species of waterfowl, diverse intertidal and subtidal communities, and all five species of wild Pacific salmon. Healthy coastal resources are critical to the economic and social wellbeing of Cook Inlet communities. One of the challenges in the efforts to restore the environment following the *Exxon Valdez* oil spill has been the lack of adequate data describing conditions prior to the spill. It is essential that monitoring take place in Cook Inlet now, before more impacts are realized, so that reference conditions can be established from which to notice changes. Yet, state and federal agencies responsible for water quality monitoring are strapped by budget cuts, and unable to collect the water quality information needed to ensure compliance with state and federal water quality standards.

Citizens care about water quality and habitat, and want to participate in efforts to understand their watersheds. Several Cook Inlet communities have already begun to organize to protect local habitat and water quality. Many of these efforts, however, begin without knowing what resources are available, or what other groups are working toward similar goals.

By improving access to habitat and water quality information, this project will help improve our understanding of water quality and habitat, enhance watershed stewardship among citizens, and provide decision makers, agencies and communities with the tools they need to manage human uses and reduce pollution. As a result, this project will improve the rate of natural resource recovery in the Cook Inlet watershed and help prevent future harms from occurring.

### ***C. Location***

Keeper's Citizens' Environmental Monitoring Program takes place in the Cook Inlet basin, which covers 47,000 square miles of terrestrial, coastal and marine habitat in Southcentral Alaska. Communities involved in and affected by the project include Anchorage, Palmer, Wasilla, Kenai, Soldotna, Ninilchik, Anchor Point, Homer, Seldovia, Port Graham, and Nanwalek. Other communities which may play more of a role in the project in the future include: Talkeetna, Willow, Knik, Chickaloon, Eklutna, Eagle River, Girdwood, Cooper Landing, Nikiski, Tyonek and others. Although this project currently focuses within the geographic boundaries of the Cook Inlet watershed, the online, interactive database is being used as a prototype for the State and will eventually evolve into a clearinghouse for Alaska-wide water quality data.

## ***COMMUNITY INVOLVEMENT AND TRADITIONAL KNOWLEDGE***

Citizen-based monitoring is a community-owned and community-driven effort. It is a highly effective way to bridge the gap between citizens and natural resource agencies. Citizens are directly involved in collecting and tracking water quality information, and have a greater sense of ownership of the monitoring findings.

Citizen monitoring is also an important way to integrate traditional environmental knowledge (TEK) with science. Many of the citizens who become involved in the monitoring efforts have a long history with their local regions; and during that time, have observed environmental changes. Visual and other observations through narration, photographs and sketches are one way that TEK

is incorporated, and Keeper continues to strengthen TEK components of citizen-based monitoring.

This project will further community involvement in the Citizen Environmental Monitoring Program by providing communities with greater access to monitoring result and translating it in visual ways which are educational and meaningful. Audiences which may find particular use for monitoring data include community planners, local and Tribal governments, commercial and sport fishermen, university personnel and students, environmental consultants, decision makers, and resource agencies such as Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, U.S. Geological Service, and others. This project will create a database where citizen information, including Traditional Environmental Knowledge, is shared so that it can be compared to agency science, and help facilitate an exchange of information and ideas about habitat and water quality.

## ***PROJECT DESIGN***

### ***A. Objectives***

The overall goal of this project is to make data more accessible and more useful to decision makers, stakeholders, resource managers, and the public. The objectives include:

- 1) Create a consistent data management system where all citizen groups and agencies can equally share, report and review their water quality and habitat data;
- 2) Interface citizen-collected data with EPA's STORET to make it more useful to agencies; and
- 3) Make habitat and water quality data accessible on the Internet in a user-friendly, interactive format with links to GIS maps, photos and graphs.

### ***B. Methods***

The database committee has identified the following priorities for a consistent data management and reporting system:

1. move data in a simple and easy way;
2. make data available to the public on the Internet in an educational and meaningful way with links to charts, watershed maps and photos;
3. interface data with EPA's STORET water quality database so that it is more useful to scientists and resource managers;
4. allow for local groups to view their own data once it is entered;
5. create a way for local groups to compare their data with data from other citizen monitoring partners and with agencies;
6. allow local groups to view water quality data from any source which is relevant to their area of interest;
7. include database securities protocols that are appropriate for the web; and

8. allow for a database system which opens up a wider variety of water quality and habitat parameters and methods.

The committee has identified model programs for guidance. Specifically, the partners are looking at the IOWATER ([www.iowater.net](http://www.iowater.net)) program as an exciting prototype for its on-line interactive database. The partners also realize there are other existing systems of Alaska data that they can use to help build a unified database – those include: 1) Keeper's Access database which is used by Keeper, Kenai Watershed Forum, Wasilla Soil and Water Conservation District, and Anchorage Waterways Council; 2) CIIMMS database; 3) Mat-Su Borough Lake data which is under development; 4) ENRI's EDAS access database which is for professional-level aquatic macroinvertebrate data; 5) ENRI's Educational database which is purely educational and being developed for web application; 6) EPA's STORET which is the national water quality database clearinghouse for all EPA-funded projects; 7) USGS's NWIS for professional USGS-collected data; and 8) Anchorage Municipality Water quality database.

The database committee is considering two possible directions: 1) use, maintain and continue to develop Cook Inlet Keeper's Access database, and interface this data with Internet in ways that meet needs and interests of citizen-based groups and then export data from the Access database into STORET to meet research needs and goals; OR 2) enter data directly into STORET through an interface module and then extract the data for local needs through a data-download or through the EPA developed report application for uplink to the Internet with links to maps, graphs and photos.

ADEC is currently performing an analysis of the proposed STORET data sources with special attention to required STORET fields and rules. Simultaneously, ADEC is looking at other possible database scenarios. This analysis will be complete in early fall 2001, at which point the project partners will be well positioned to move forward with the project objectives. This timing will work nicely with the EVOS funding schedule.

In the fall of 2001, the partners will be ready to contract with a database specialist to help the committee implement the interface and output that best meets their database priorities and objectives. A \$15,000 grant from the *Exxon Valdez Oil Spill* Trustees Council will provide the partners with the funds they need to make this essential data compilation and dissemination project a success. Support from the Trustees will result in the most coordinated, credible and consistent water quality data management system in Alaska where citizens and agencies can equally share, report and review water quality and habitat information.

Although this project currently focuses within the geographic boundaries of the Cook Inlet watershed, this database will be used as a prototype for the State and will eventually evolve into a clearinghouse for Alaska-wide volunteer-collected water quality and habitat data. This project will result in essential compilation and analysis of citizen-collected data, and make this information more accessible to agencies and the public. By improving access to monitoring results, this project will help improve our understanding of water quality and habitat, enhance watershed stewardship among citizens, and provide decision makers, agencies and communities with the tools they need to management and protect our natural resources.

### ***C. Cooperating Agencies, Contracts and Other Agency Assistance***

The database committee is composed of the various agencies and groups who participate in citizen-based monitoring and have a vested interest in getting a shared database on the Internet. These groups include:

Alaska Department of Environmental Conservation – ADEC is the primary funder of citizen-based monitoring programs in Alaska and is collaborating closely with monitoring groups to make their data more useful to agencies and more accessible to the public. ADEC is working with the committee to determine the best ways citizen-collected data can be interfaced with EPA's STORET, so that Alaska's data can be compared with water quality information from throughout the Nation. CIIMMS is working closely with ADEC in this role.

UAA's Environment and Natural Resource Institute: ENRI serves on the database committee and is working to link macroinvertebrate monitoring data to the database. This and other biological monitoring data are key to understanding habitat issues related to water quality.

Mat-Su Borough: The Borough coordinates a citizen-based Lake's Monitoring Program in the Mat-Su Valley. Currently there is little interface between lake monitoring and stream and estuarine monitoring. The Mat-Su Borough is working with the database committee to expand the parameters and the methods in the shared database so that it is compatible with lake monitoring.

Anchorage Waterways Council, Wasilla Soil and Water Conservation District, Homer Soil and Water Conservation District, and Kenai Watershed Forum: These four groups oversee community-based water quality monitoring efforts in their local areas, and currently share the same Quality Assurance protocols, methods and database. They are working with the database committee to determine ways to incorporate other methods and parameters in the database to make it more comprehensive of water quality and habitat information, and to link the database on the Internet to improve the exchange and review of data among and between the partner group.

Cook Inlet Keeper: Cook Inlet Keeper coordinates citizen-based monitoring on the lower Kenai Peninsula. Furthermore, Keeper serves as the Quality Assurance Agent to oversee the quality performance of other citizen-based monitoring efforts in the Cook Inlet watershed. Keeper has played a key role in pulling various citizen and agency groups together to facilitate the exchange of information and ideas and is taking a lead in facilitating the database committee in meeting its objective.

### ***SCHEDULE***

#### ***A. Measurable Project Tasks for FY 02 (October 1, 2001 – September 30, 2002)***

October 1:	Contract with database and web specialist
October 15:	Determine best data system that allows for all parameters and methods

and meets committee's database priorities

November 1: Identify and create GIS maps and graphs to link with database

December 1: Create interface between database, GIS and the Internet

January 14-23: Attend annual restoration workshop

February 1: Establish securities for database access on the web

March 1: Formalize Standard Operative Procedures for quality oversight of database use and data management

May 1: Uplink database on the web and conduct press and other outreach to key audiences to announce its availability

May 1: Oversee use of the database by monitoring partner groups as a way to enter and manage their habitat and water quality data

July 1: Evaluate product and plan accordingly

August 1: Update and maintain web page

April 13, 2003: Submit annual report

### ***B. Project Milestones and Endpoints***

Fulfillment of project objectives will be measured by the following milestones:

1. Database system in place where all citizen groups can equally share, report and review water quality data (May 2002)
2. Citizen-collected data uplinked to EPA's STORET (December 2001)
3. Interactive database accessible on the internet with links to maps, photos and graphs (July 2002)
4. Final Report on project to EVOS Trustees Council (April 15, 2003)

### ***C. Completion Date***

This database and Internet product will be complete by September 30, 2002. The final report for EVOS Trustees Council will be complete by April 15, 2003.

### ***PUBLICATIONS AND REPORTS***

In October 2001, Keeper will released "Cook Inlet Citizens' Environmental Monitoring Project Annual Water Quality Status Report" which will present five-years of water quality data collected by volunteers in the Kachemak Bay watershed. As with previous annual reports, the October 2001 report will be distributed to concerned citizens, agency personnel, tribal councils, and the press. Previous annual reports are available on the Keeper's web page at <http://www.inletkeeper.org/cemp/cempd1.asp>.

### ***PROFESSIONAL CONFERENCES***

Cook Inlet Keeper is not requesting any EVOS funds for professional conferences.



## ***NORMAL AGENCY MANAGEMENT***

Not applicable.

## ***COORDINATION AND INTEGRATION OF RESTORATION EFFORTS***

Cook Inlet Keeper has a close relationship with many of the restoration efforts that have been funded by the Trustees Council. Most notably, Keeper shared its *Cook Inlet GIS Atlas* on CD ROM and Annotated Bibliography to assist the Kachemak Bay National Estuarine Research Reserve's Ecological Characterization Project, and the Cook Inlet Information Monitoring and Management Systems database project. Keeper is linked to the CIIMMS web page, and once its water quality database and interactive GIS maps become available on the Internet, they will be integrated with the CIIMMS database. The information Keeper shares with CIIMMS contributes greatly to a more holistic understanding of Cook Inlet's resources, pollution sources, and other conditions.

Keeper is working with Kachemak Bay National Estuarine Research Reserve to bring together citizen volunteer monitors and professional researchers to deploy a systematic array of electronic sensors along the south and north sides of Kachemak Bay, which will coincide with volunteer water quality monitoring sites, to assess water circulation patterns throughout the Bay. Keeper also collaborates with UAA's Kachemak Bay Campus which makes an in-kind contribution of lab space for water quality laboratory analysis.

Keeper cooperates with agencies that conduct water quality monitoring in the Cook Inlet basin. These agencies include: U.S. Geological Survey, Alaska Department of Environmental Conservation, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, Alaska Department of Fish and Game, Alaska Department of Natural Resources, and the Cook Inlet Regional Citizens Advisory Council. Representatives from each of these agencies participate as members of Keeper's TAC.

In addition to Trustees-funded Restoration Projects, Keeper collaborates with numerous other local and national groups and agencies. For example, Keeper is a partner in the Pratt Museum's Kachemak Bay Discovery Project, a member of the River Network and a member of the National Water Keeper Alliance.

Cook Inlet Keeper's monitoring project has been funded through ADEC by EPA 319 nonpoint source grant money over the last three years, along with other sources to meet EPA's required 40% non-federal match. Keeper's other monitoring support has included grants from the Skaggs Foundation (\$8,000 in 1999 and \$5,000 in 2001), Norcross Wildlife Foundation (\$10,000 in 1999 and \$13,000 in 2001), River Network Watershed Assistance Grant (\$20,000 in 1999), Bullitt Foundation (\$10,000 in 2000), individuals and businesses (~\$10,000/yr.) fees for GIS services (~\$5,000/yr.), and in-kind contributions of time and services (~\$25,000/yr.).

Keeper's monitoring budget for FY 02 is \$205,313. Keeper anticipates a few more years of funding from EPA, including \$105,000 in FY 02. Keeper will raise additional funding from other grants, individuals, businesses and fees for services.

Funding from EVOS will help Keeper make citizen-collected data more useful to scientists and to make the data readily accessible to decision makers, stakeholders, resource managers, and the public. This project will provide agencies and the public with the information needed to better understand threats to, and solutions for coastal resources, and will lead to improved stewardship and coastal watershed and wildlife habitat protection in Alaska.

***EXPLANATION OF CHANGES IN CONTINUING PROJECTS***

Not applicable.

***PROPOSED PRINCIPAL INVESTIGATOR IF KNOWN***

Name: Joel Cooper, Research Coordinator  
Affiliation: Cook Inlet Keeper  
Mailing Address: PO Box 3269, Homer, Alaska 99603  
Phone number: (907) 235-4068  
Fax number: (907) 235-4069  
E-mail Address: joel@inletkeeper.org

### ***PRINCIPAL INVESTIGATOR***

Joel joined Cook Inlet Keeper's staff in 1998 to implement a professional-level monitoring program on lower Kenai Peninsula Salmon Streams. Later that year, Joel moved to Keeper's Citizens' Environmental Monitoring Program to coordinate and oversee citizen water quality monitoring in Kachemak Bay. Prior to joining Keeper, some of Joel's work experience included conducting stream surveys for the U.S. Forest Service, serving as an Organic Chemist for the Rocky Mountain Analytical Laboratory, and working as Environmental Scientist for the Southern Illinois University Department of Pollution Control. Joel has a B.S. in Environmental Studies focusing on forestry, plant and soil sciences from Southern Illinois University, and considerable sampling and monitoring experience with the U.S. Fish & Wildlife Service, National Park Service and the U.S. Forest Service.

### ***OTHER KEY PERSONNEL***

Jeff Hock, Database Chief – Alaska Department of Environmental Conservation  
Russell Kunibe, Analyst Programmer – Alaska Department of Environmental Conservation  
Elaine Major, Research Associate – UAA's Environment and Natural Resource Institute  
Harry Banks, Program Analyst – Mat-Su Borough Planning Department  
Dan Bogan, Volunteer Coordinator – Anchorage Waterways Council  
Laura Eldred, Program Director – Wasilla Soil and Water Conservation District  
Robert Ruffner, Program Director – Kenai Watershed Forum  
Shirley Schollenberg, Program Director – Homer Soil and Water Conservation District

### ***ATTACHMENTS***

(one copy each)

Database Committee List

**EVOS Trustees Council**  
**Budget Form**  
 October 1, 2001 - September 30, 2002

<b>Budget Category:</b>	Authorized FY 2001	Proposed FY 2002					
Personnel		\$19.2					
Travel		\$0.9					
Contractual		\$42.1					
Commodities		\$0.1					
Equipment		\$10.0					
Subtotal		\$72.3	LONG RANGE FUNDING REQUIREMENTS				
Indirect		\$7.23	Estimated FY 2003				
Project Total		\$79.5					
Full-time Equivalents (FTE)		6.0					
Dollar amounts are shown in thousands of dollars.							
Other Funds		\$64.5					
<p>The project partners are requesting \$15,000 from the Exxon Valdez Oil Spill Trustees Council. The additional \$64,500 has already been secured as either in-kind or monetary match. The match includes: 16,700 of personnel which is primarily the time of committee members valued at \$20/hour X 80 hours/member; 400 in travel to database committee meetings; 32,100 in contractual which includes ADEC contract to perform an analysis of STORET and the partners' contract for a database/web specialist to fulfill the project objectives; 10,000 in equipment for any necessary computer software; and 5,330 in administrative costs. The partners are requesting the following from EVOS: 2,500 in personnel to oversee committee and contracts; 500 in travel for EVOS annual workshop; 10,000 for contract to database/web specialist; 100 for supplies and 1,900 for administrative overhead.</p>							

**FY 02**

Project Number: 02668  
 Project Title: Developing an Interactive Water Quality and Habitat Database and Making it Accessible on the Web  
 Agency: Cook Inlet Keeper

Prepared:  
 12-Apr-00

<b>Personnel Costs:</b>		Months	Monthly	
-------------------------	--	--------	---------	--

**EVOS Trustees Council  
Budget Form**

October 1, 2001 - September 30, 2002

Name	Position Description	Budgeted	Costs	Overtime	
J. Cooper - Keeper	Research Coordinator	1.0	3.2		
J. Hock - ADEC	Database Chief	0.5	3.2		
R. Kunibe - ADEC	Analyst Programmer	1.0	3.2		
C. Fries - CIIMMS	Director	0.5	3.2		
E. Major - ENRI	Research Associate	0.5	3.2		
H. Banks - M-S Borough	Planning Department	0.5	3.2		
D. Bogan - AWC	Monitoring Coordinator	0.5	3.2		
L. Eldred - WSWCD	Program Director	0.5	3.2		
R. Ruffner - KWF	Program Director	0.5	3.2		
S. Schollenberg - HSWCD	Program Director	0.5	3.2		
<b>Subtotal</b>		6.0	32.0	0.0	
<b>Personnel Total</b>					
<b>Travel Costs:</b>		<b>Ticket Price</b>	<b>Round Trips</b>	<b>Total Days</b>	<b>Daily Per Diem</b>
Description					
1 - RT Homer to Anchorage - Annual Restoration Workshop		0.17	1	2	0.05
1 Rental Car - 2 days for Annual Restoration Workshop (\$50/day)					
Accommodation 2 nights - Annual Restoration Workshop (\$50/day)					
1 - RT Homer to Anchorage for database committee meeting		0.17	1	1	0.05
1 - RT Kenai to Anchorage for database committee meeting		0.12	1	1	0.05
<b>Travel Total</b>					

**FY 02**

Prepared:  
12-Apr-00

Project Number:  
Project Title: Developing an Interactive Water Quality and Habitat Database and Making it Accessible on the Web  
Agency: Cook Inlet Keeper

<b>Contractual Costs:</b>
Description

**EVOS Trustees Council  
Budget Form**

October 1, 2001 - September 30, 2002

Teleconferences for database committee Other Communications (phone, fax, email) Contract for database design, interface with GIS and web, and interface with STORET	
<b>Contractual Total</b>	
<b>Commodities Costs:</b>	
Description	
Supplies	
<b>Commodities Total</b>	

**FY 02**

Project Number:  
Project Title: Developing an Interactive Water Quality and  
Habitat Database and Making it Accessible on the Web  
Agency: Cook Inlet Keeper

Prepared:  
12-Apr-00

<b>New Equipment Purchases:</b>		Number of Units	Unit Price
Description			
	Internet/Database/GIS interfacing software like Internet Map Server	1	10.0

**EVOS Trustees Council  
Budget Form**  
October 1, 2001 - September 30, 2002

Indicate replacement equipment with an R.	<b>New Equipment Total</b>
<b>Existing Equipment Usage:</b>	Number of Units
Description	

**FY 01**

Project Number:  
 Project Title: Developing an Interactive Water Quality and  
 Habitat Database and Making it Accessible on the Web  
 Agency: Cook Inlet Keeper

Prepared:  
12-Apr-00